

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently amended): An optical disc system for recording data to an optical disc rotating at a constant angular velocity (CAV), the optical disc comprising:

5 a spindle motor for rotating the disc at a constant angular velocity (CAV);
an optical pickup unit for accessing data on the optical disc and producing a wobble signal;
a circuit electrically connected to the spindle motor for generating a control signal according to a rotation speed of the spindle motor and for
10 controlling the spindle motor to rotate the disc at the constant angular velocity according to the control signal, wherein the circuit does not utilize the wobble signal when generating the control signal;
a phase locked loop (PLL) for extracting a wobble signal carrier frequency from the wobble signal output by the optical pickup unit;

15 a clock synthesizer electrically connected to the PLL for producing a channel clock conforming to the CAV according to the carrier frequency output by the PLL and the operating speed of the spindle motor;

a data encoder for being used in accordance with the channel clock output by the clock synthesizer to encode incoming data and produce a corresponding data signal; and

20 an optical pickup unit driver circuit connected to the optical pickup unit for controlling the optical pickup unit according to a write strategy of the optical disc system and the data signal output by the data encoder.

25 Claim 2 (original): The optical disc system of claim 1 further comprising a pre-amplifier electrically connected to the PLL and the optical pickup unit for amplifying the wobble signal output by the optical pickup unit.

Claim 3 (Currently amended): The optical disc system of claim 1 ~~further comprising~~
30 wherein the circuit comprises:
a frequency generator connected to the spindle motor for producing a first signal according to ~~[[a]]~~ the rotation speed of the spindle motor;

a crystal oscillator for producing a fixed clock;
a frequency divider connected to the crystal oscillator for dividing the frequency
of the inputted fixed clock to produce a second signal;
a frequency comparator connected to the frequency generator and the frequency
5 divider for comparing the first signal and the second signal so as to
produce ~~[[a]]~~ the control signal; and
a motor driver circuit for driving the spindle motor to rotate the optical disc
according to the control signal.

10 Claim 4 (original): The optical disc system of claim 1 being an optical disc recorder.

Claim 5 (original): The optical disc system of claim 1 wherein the optical pickup unit
is a laser pickup.

15 Claim 6 (Currently amended): A method of using an optical disc system for recording
data to an optical disc rotating at a constant angular velocity comprising:
providing a spindle motor for rotating the disc at a constant angular velocity
(CAV);
providing an optical pickup unit for accessing data on the optical disc and
20 producing a wobble signal;
providing a circuit for generating a control signal according to a rotation speed
of the spindle motor and for controlling the spindle motor to rotate the
disc at the constant angular velocity according to the control signal,
wherein the circuit does not utilize the wobble signal when generating
25 the control signal;
providing a phase-locked loop (PLL) for extracting a wobble signal carrier
frequency from the wobble signal output by the optical pickup unit;
providing a clock synthesizer electrically connected to the PLL for producing a
channel clock conforming to the CAV according to the carrier frequency
30 output by the PLL and the operating speed of the spindle motor;
providing a data encoder for being used in accordance with the channel clock
output by the clock synthesizer to encode incoming data and produce a

corresponding data signal; and
providing an optical pickup unit driver circuit connected to the optical pickup
unit for controlling the optical pickup unit according to a write strategy
of the optical disc system and the data signal output by the data encoder.

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Claim 7 (Currently amended): The method of claim 6 further comprising providing a
pre-amplifier electrically connected to the PLL and the optical pickup unit for
amplifying the wobble signal output by the optical pickup unit.

10 Claim 8 (Currently amended): The method of claim 6 ~~further comprising~~ wherein the
step of generating the control signal and controlling the spindle motor
according to the control signal further comprises:

providing a frequency generator connected to the spindle motor for producing
a first signal according to [[a]] the rotation speed of the spindle motor;
15 providing a crystal oscillator for producing a fixed clock;
providing a frequency divider connected to the crystal oscillator for dividing
the frequency of the inputted fixed clock to produce a second signal;
providing a frequency comparator connected to the frequency generator and
the frequency divider for comparing the first signal and the second signal
20 so as to produce [[a]] the control signal; and
providing a motor driver circuit for driving the spindle motor to rotate the
optical disc according to the control signal.

Claim 9 (original): The method of claim 6 wherein the optical disc system is an
25 optical disc recorder.

Claim 10 (original): The method of claim 6 wherein the optical pickup unit is a laser
pickup.

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